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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,667	07/20/2006	Anne Ortiz-Julien	BJS-1721-122	8048

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EXAMINER

BADR, HAMID R

ART UNIT	PAPER NUMBER
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1781

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,667	Applicant(s) ORTIZ-JULIEN, ANNE	
	Examiner HAMID R. BADR	Art Unit 1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' amendment filed 02/01/2010 is acknowledged.

Objection to claims 13-22 and 25-27 are withdrawn per amendments.

Rejection under 35 USC 101 (Use claims) is withdrawn per amendments.

Rejection of claims 15, 16, 17, 20, 22, 25 and 27 under 35 USC 112 second paragraph is withdrawn per amendments.

Claims 13-35 are being considered on the merits.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 22 is indefinite for the language of the claim. It is not clear what is meant by this claim as a whole.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claims 13-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrarini (EP 1,236,795; hereinafter R1) in view of Salgues et al. (1986, Oxidation of grape juice 2-S-glutathionyl caffeoyl tartaric acid by *Botrytis cinerea* laccase and characterization of a new substance: 2,5-di-S-glutathionyl caffeoyl tartaric acid).

3. R1 discloses an improved vinification process wherein a dose of oenological yeast in active paste form or other forms in a moist state is introduced into the wine. The treatment is provided during the refining of the wines for improvement of its organoleptic and compositional qualities. (Abstract). Given that various forms of yeast other than paste can be introduced into the wine, it is obvious that active dry yeast or inactive dry yeast, as presently claimed, can be added to the must.

4. R1 discloses that the yeast in lysis liberates enzymes which contribute to the improved evolution of the wines. R1 teaches that even dead yeast consumes dissociated oxygen and therefore, wines conserved in the presence of yeast are less subject to oxidation phenomena. R1 adds that the "secondary" actions are performed by yeasts both in the fermentation phase and in the post fermentation phase .[0011 and 0012]. Given that the secondary action of yeast can be performed in the fermentation phase, adding the glutathione enriched yeast as a part of fermenting yeast, as presently claimed, would be obvious to an artisan.

5. It is also noted that yeast naturally contains glutathione and the glutathione is released into the wine. White grapes also contain natural glutathione which will protect the juice or the wine made therefrom. Therefore, adding yeast, as taught by R1, is in fact a method of adding natural glutathione to the wine.

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6. R1 discloses that added yeast cells will cause, inter alia, the absorption of oxygen and consequent reduction of oxidation of wine. [0033]

7. R1 discloses that the secondary dose of yeast is 0.5-3 g/L which can be added to white wines and red wines. [0037]. The addition of the secondary dose of yeast may take place at any point in the maturation or refinement process of the wine [0034].

8. It is noted that yeast e.g. baker's yeast naturally contains 1-10% glutathione on a dry basis. Therefore, adding yeast containing e.g. 1% glutathione at 0.5 g/L will introduce about 5 mg glutathione per liter of must as presently claimed.

9. While R1 discloses the inclusion of oenological yeast for the purpose of improving the organoleptic properties of wines, R1 is silent regarding the role of glutathione as an anti-oxidative agent.

10. R2 discloses the role of glutathione in preventing the oxidation and browning in white grape juice. R2 discloses that in juice exposed to air, caftaric acid disappears and the so called "grape reaction product" (GRP) is formed. In the presence of polyphenol oxidase (PPO, in grapes), caftaric acid can undergo oxidation resulting in browning of juice. However, R2 concludes that addition of glutathione increases the concentration of GRP and since GRP is not a substrate for PPO, the juice resists browning. (Abstract, and page 1192 Results and Discussion: Browning and PPO oxidation)

11. The browning reactions in white wines due to polyphenol oxidase and oxygen were known at the time of invention. R1 and R2 clearly disclose the role of glutathione in preventing undesirable changes during the aging of white wine. However, since addition of pure glutathione to wine is not allowed, the most justified method would be

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the addition of glutathione enriched yeast. On the other hand, techniques for producing glutathione enriched yeast were also known in the art, therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to add glutathione enriched yeast to the must for primary fermentation or a secondary function as taught by R1 and R2. One would do so to protect white wine from oxidative changes during aging. Absent any evidence to contrary and based on the combined teachings of the cited references, there would be a reasonable expectation of success in adding a glutathione enriched yeast to the must.

Response to Arguments

Applicants' arguments have been reviewed thoroughly. These arguments are not deemed persuasive for the following reason.

1. Applicants argue that paragraph [0037] of R1, teaches that the oenological yeast causes "absorption of oxygen", and that the interest of such an effect is not stressed.
 - a. Paragraph [0037] does not teach this concept. Paragraph [0033] discloses this concept. However, glutathione, being naturally present in yeast cells and white grapes, is a strong reducing agent and its anti-oxidant effect will be inherent in wines. There is not need to stress the anti-oxidant properties of this compound.
2. Applicants argue that the high reduction of oxygen content is considered in paragraph [0042], as being an effect to be avoided and that R1 proposes to use low doses of oxygen.

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a. Paragraph [0042] does not disclose this concept. Paragraph [0038] teaches of avoiding “excessive” reduction of oxygen content. Therefore, a normal oxygen reduction is in order. However, should it be necessary for over-exhausted oxygen, small dose of oxygen is possible to be envisaged not proposed. The oxygen is not a requirement by R1.

3. Applicants argue that there is no teaching or suggestion in R1, leading to specifically choose as yeast for the secondary dose, an enriched glutathione yeast.

a. As discussed under rejections, yeast cells naturally contain glutathione so do white grapes. Therefore, adding any yeast would inherently introduce glutathione to the must. However, since glutathione is a known anti-oxidant and addition of pure glutathione is not allowed in wines, the addition of glutathione enriched yeast would be obvious.

On the other hand, R1 discloses that one of the functions of added yeast is "absorption of oxygen". To absorb oxygen an oxygen reactive compound is necessary. Adding glutathione in the form of yeast would be a logical choice. It is obvious that a glutathione enriched yeast would provide the extra glutathione required as an antioxidant.

4. Applicants argue that R2 concerns the oxidizing effect of *Bothrytis cinerea* laccase on oxidation of musts and wines produced from bothrytized grapes.

a. R2 is a teaching reference which explains the effect of oxidation in white wines. It also discloses the anti-oxidant properties of glutathione with regard to oxidation. Therefore, it justifies the inclusion of extra glutathione in wines. The oxidation of wine components is undesirable regarding the organoleptic properties of wine. It does not

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matter whether this oxidation is by *Bothrytis laccase* or polyphenol oxidase and oxygen. In all cases glutathione would act as a strong antioxidant whose inclusion into the wine would be justifiable.

Therefore, the claimed invention would be obvious in light of the teachings of R1 and R2 and knowledge available in the art at the time of the invention.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-F, 8:00-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R. Badr
Examiner
Art Unit 1781

/Keith D. Hendricks/

Supervisory Patent Examiner, Art Unit 1781